



*Report on the  
GSFC-JPL  
Quality Mission Software Workshops*

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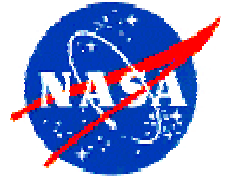
Presented at the  
*25th Annual Software Engineering Workshop*  
Goddard Space Flight Center

November 30, 2000



# *Charge to QMSW Participants*

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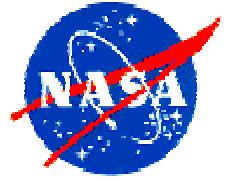


- ✦ Many of the challenges for future NASA mission success are software challenges
- ✦ Wake-up call has been sounded and been painfully reinforced by software-related mission failures
- ✦ There is ample room for software process improvement
- ✦ There may be little need for software process invention
- ✦ Nonetheless, NASA has unique challenges in software
- ✦ Technology and infrastructure play an important role
- ✦ Success will come from the project, practitioner and process communities working together
- ✦ This workshop series is for sharing ideas and finding common solutions



# 1st QMSW Workshop

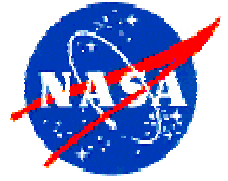
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- ✦ 1st GSFC-JPL Quality Mission Software Workshop held in Annapolis, MD, August 1999
- ✦ Working assumption was that NASA's two science mission centers would share similar challenges, issues and lessons in the area of quality mission software
- ✦ Theme of 1st workshop was information exchange
- ✦ Expectations were well borne out, with ample common ground, interests and goals
- ✦ Candid, productive relationships developed between project personnel, software practitioners, and software process owners at both Centers
- ✦ Report of 1st workshop published October 1999



# 2nd QMSW Workshop



- ◆ 2nd Workshop held in Fallbrook, CA, May 2000
- ◆ Five sessions, with co-chairs from GSFC and JPL
  - Software Practitioner Concerns
  - Technology and Infrastructure for Software Development
  - Software Metrics
  - Relationships to Projects
  - Understanding Mission Software Sub-disciplines
- ◆ Special Topic: Update on NASA IV&V
- ◆ Theme of 2nd Workshop was creating collaborations
- ◆ Explicit outreach to GSFC and JPL Project Managers



## *Collaborations from 2nd QMSW*

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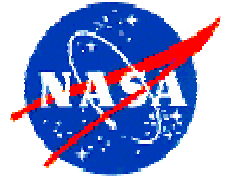


- ✦ JPL-developed course “Understanding Software for Project Management” given here at SEW25
- ✦ GSFC ISC and JPL CSMISS working together to define roles and responsibilities of Software Architects, Software Engineers, Software Managers on missions
- ✦ Seeking applications of GSFC-developed IML (Instrument Modeling Language) at JPL
- ✦ Establishing common software metrics in areas of mutual emphasis: communicating development status, reliability, requirements, estimation
- ✦ Sharing of Software Development Principles and knowledge of COTS products
- ✦ Cross-participation in Software Reviews



# *3rd QMSW Workshop*

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- ✦ Planning meeting occurring this week during SEW25
- ✦ Likely timeframe - April 2001
- ✦ East coast venue - possibly Williamsburg, VA
- ✦ Likely theme – Emphasis on working sessions and products by end of workshop
- ✦ Principal organizers
  - Mary Ann Esfandiari, GSFC
  - Chi Lin, JPL